CONTENTS

Volume 51, Issue Nos. 1–12 (2001)

International Journal for

NUMERICAL METHODS IN ENGINEERING

Issue No. 1

Self-regular boundary integral equation formulations for Laplace's equation in 2-D: A. B. Jorge, G. O. Ribeiro, T. A. Cruse and T. S. Fisher 1

On the spectrum of the electric field integral equation and the convergence of the moment method: K. F. Warnick and W. C. Chew 31

A basic thin shell triangle with only translational DOFs for large strain plasticity: F. G. Flores and E. Oñate 57

A three-noded shear-flexible curved beam element based on coupled displacement field interpolations: P. Raveendranath, G. Singh and G. Venkateswara Rao 85

Well-posedness and numerical performances of the strain gap method: G. Romano, F. Marotti de Sciarra and M. Diaco 103

Issue No. 2

Inverse optimal design of cooling conditions for continuous sheet quenching processes: Y. Ruan 127

Two-dimensional unsteady heat conduction analysis with heat generation by triple-reciprocity BEM: Y. Ochiai 143

Numerical study of grid distribution effect on accuracy of DQ analysis of beams and plates by error estimation of derivative approximation: C. Shu, W. Chen, H. Xue and H. Du 159

papers in this journal are available online
ahead of the print issue

Wiley InterScience
EarlyView®

www.interscience.wiley.com

This journal's homepage, where a Cumulative Author, Title and Subject Index is freely available, as well as a Conference Diary and Award Announcements, can be found at the address:
http://www.interscience.wiley.com/jpages/0029-5981/

The *International Journal for Numerical Methods in Engineering* is covered by the following abstracting and indexing services: Applied Mechanics Reviews, BHRA Fluid Engineering Centre (Elsevier), Cambridge Scientific Abstracts/Materials Information, CompuMath Citation Index (ISI), Current Contents®/Engineering, Computing & Technology (ISI), Earthquake Engineering Abstracts (NISEE), Ei COMPENDEX PLUS, Ei Page One, Geobase (Elsevier), Geotechnical Abstracts (Geotext Services), Indian Society of Earthquake Technology Bulletin, INSPEC, International Aeronautical Abstracts & Database (AIAA), International Civil Engineering Abstracts (Anbar), International Petroleum Abstracts, ISI Alerting Services, Materials Science Citation Index (ISI), Mathematical Reviews, Mechanics, PASCAL Database (INIST), Science Citation Index Expanded (also known as SciSearch®) (ISI), Science Citation Index® (ISI), Shock & Vibration Digest (Sage), Tribology and Corrosion Abstracts, Zentralblatt für Mathematik/Mathematic Abstracts.

Combined hybrid approach to finite element schemes of high performance: T.-X. Zhou and Y.-F. Nie 181

A semi-analytical locally transversal linearization method for non-linear dynamical systems: D. Roy and L. S. Ramachandra 203

On topology optimization of plates with prestress: N. L. Pedersen 225

Higher-order hybrid-mixed axisymmetric thick shell element for vibration analysis: J. G. Kim and Y. Y. Kim 241

Issue No. 3

A combined *rh*-adaptive scheme based on domain subdivision. Formulation and linear examples: H. Askes and A. Rodríguez-Ferran 253

Displacement/pressure mixed interpolation in the method of finite spheres: S. De and K.-J. Bathe 275

The extended finite element method for rigid particles in Stokes flow: G. J. Wagner, N. Moës, W. K. Liu and T. Belytschko 293

An algorithm and a method to search bifurcation points in non-linear problems: R. Chambon, S. Crochepeyre and R. Charlier 315

Frequency-domain analysis of time-integration methods for semidiscrete finite element equations—part I: Parabolic problems: A. Muğan and G. M. Hulbert 333

Frequency-domain analysis of time-integration methods for semidiscrete finite element equations—part II: Hyperbolic and parabolic-hyperbolic problems: A. Muğan . . . 351

Issue No. 4

An implicit boundary element solution with consistent linearization for free surface flows and non-linear fluid—structure interaction of floating bodies: P. Donescu and L. N. Virgin 379

Analysis of post-buckling branches at multiple symmetric bifurcations: A. Magnusson 413

Application of upper bound method to the powder-forging of cup-shaped axi-symmetric preforms for estimating punch load: J. R. Cho and H. S. Jeong 429

Three-dimensional stochastic finite element method for elasto-plastic bodies: M. Anders and M. Hori 449

Dimensional model reduction in non-linear finite element dynamics of solids and structures: P. Krysl, S. Lall and J. E. Marsden 479

Issue No. 5

Dynamic stiffness for piecewise non-uniform Timoshenko column by power series—part I: Conservative axial force: A. Y. T. Leung, W. E. Zhou, C. W. Lim, R. K. K. Yuen and U. Lee 505

Dynamic stiffness for piecewise non-uniform Timoshenko column by power series—part II: Follower force: A. Y. T. Leung, W. E. Zhou, C. W. Lim, R. K. K. Yuen and U. Lee 531

Complementarity methods for multibody friction contact problems in finite deformations: P. Chabrand, O. Chertier and F. Dubois 553

Validation of a novel algorithm for the adaptive calculation of transient stratified flow of gas, oil and water in pipelines: L .Hanich and C. Thompson 579

On a progressive simultaneous iteration method for vibration analysis of gyroscopic systems: K. K. Gupta and C. L. Lawson 609

Transient vibration and sound radiation of a rectangular plate with viscoelastic boundary supports: Z. Fan 619

Issue No. 6

A numerical estimation of the effects of a cylindrical hole and imperfect bonding on stability of a fibre in an elastic matrix: Y. N. Lapusta and W. Wagner 631

A 2-D time-domain boundary element method with damping: F. Jin, O. A. Pekau and C. H. Zhang 647

A parallel advancing front grid generation scheme: R. Löhner 663

Remarks on the interpretation of current non-linear finite element analyses as differential-algebraic equations: P. Ellsiepen and S. Hartmann 679

Eigenderivative analysis of asymmetric non-conservative systems: S. Adhikari and M. I. Friswell 709

CFD shape optimization using an incomplete-gradient adjoint formulation: O. Soto and R. Löhner 735

Issue No. 7

Effects of approximations in analyses of beams of open thin-walled cross-section—part I: Flexural–torsional stability: Y. L. Pi and M. A. Bradford 757

Effects of approximations in analyses of beams of open thin-walled cross-section—part II: 3-D non-linear behaviour: Y. L. Pi and M. A. Bradford 773

A novel three-dimensional contact finite element based on smooth pressure interpolations: R. E. Jones and P. Papadopoulos 791

Fully C^1-conforming subdivision elements for finite deformation thin-shell analysis: F. Cirak and M. Ortiz 813

Finite element modelling of hybrid active–passive vibration damping of multilayer piezoelectric sandwich beams—part I: Formulation: M. A. Trindade, A. Benjeddou and R. Ohayon 835

Finite element modelling of hybrid active–passive vibration damping of multilayer piezoelectric sandwich beams—part II: System analysis: M. A. Trindade, A. Benjeddou and R. Ohayon 855

A geometrical-based contact algorithm using a barrier method: G. Kloosterman, R. M. J. van Damme, A. H. van den Boogaard and J. Huetink 865

Issue No. 8

Quadrilateral elements for the solution of elasto-plastic finite strain problems: J. M. A. César de Sá, P. M. A. Areias and R. M. Natal Jorge 883

An improved three-node hybrid-mixed element for Mindlin/Reissner plates: R. Ayad, A. Rigolot and N. Talbi 919

Modelling crack growth by level sets in the extended finite element method: M. Stolarska, D. L. Chopp, N. Moës and T. Belytschko 943

A variance propagation algorithm for stochastic heat and mass transfer problems in food processes: N. Scheerlinck, P. Verboven, J. D. Stigter, J. De Baerdemaeker, J. F. Van Impe and B. M. Nicolai 961

From medical images to anatomically accurate finite element grids: J. R. Cebral and R. Löhner 985

Issue No. 9

Preconditioning of the second-kind boundary integral equations for 3D eddy current problems: G. Schmidlin, U. Fischer, Z. Andjelič and C. Schwab 1009

A comparison in terms of accuracy and efficiency between a MBS dynamic formulation with stress analysis and a non-linear FEA code: J. Cuadrado, R. Gutiérrez, M. A. Naya and P. Morer 1033

A coupled BEM and arbitrary Lagrangian-Eulerian FEM model for the solution of two-dimensional laminar flows in external flow fields: D. L. Young, J. T. Chang and T. I. Eldho 1053

Genetic optimization of stiffened plates and shells: J. L. Marcelin 1079

Least-squares collocation meshless method: X. Zhang, X.-H. Liu, K.-Z. Song and M.-W. Lu 1089

Comparison of several numerical methods for mechanical systems with impacts: O. Janin and C. H. Lamarque 1101

ANNOUNCEMENT iii

Issue No. 10

Random walk method for the two- and three-dimensional LaPlace, Poisson and Helmholtz's equations: M. K. Chati, M. D. Grigoriu, S. S. Kulkarni and S. Mukherjee . 1133

Alternative time marching process for BEM and FEM viscoelastic analyses: A. D. Mesquita, H. B. Coda and W. S. Venturini 1157

Iterative solution of large-scale acoustic scattering problems with multiple right-hand-sides by a domain decomposition method with Lagrange multipliers: R. Tezaur, A. Macedo and C. Farhat 1175

Evaluations of certain hypersingular integrals on intervals: Q.-K. Du 1195

Determination of an optimal regularization factor in system identification with Tikhonov regularization for linear elastic continua: H. W. Park, S. Shin and H. S. Lee 1211

A fixed-mesh finite element thermally coupled flow formulation for the numerical analysis of melting processes: M. A. Cruchaga and D. J. Celentano 1231

Issue No. 11

Refined 9-Dof triangular Mindlin plate elements: C. Wanji and Y. K. Cheung 1259

Adaptive return mapping algorithms for J_2 elasto-viscoplastic flow: J. Lof and A. H. van den Boogaard 1283

Buckling analysis of rotationally periodic structures using shell element with relative degrees of freedom: Z. Cen, J. Li and S. T. Lie 1299

A 2.5D finite/infinite element approach for modelling visco-elastic bodies subjected to moving loads: Y.-B. Yang and H.-H. Hung 1317

A finite element formulation for the simulation of propagating delaminations in layered composite structures: W. Wagner, F. Gruttmann and W. Sprenger 1337

Locking in the incompressible limit for the element-free Galerkin method: A. Huerta and S. Fernández-Méndez 1361

Issue No. 12

Die shape design optimization of sheet metal stamping process using meshfree method: N. H. Kim, K. K. Choi and J. S. Chen 1385

A method for representing boundaries in discrete element modelling—part I: Geometry and contact detection: M. Kremmer and J. F. Favier 1407

A method for representing boundaries in discrete element modelling—part II: Kinematics: M. Kremmer and J. F. Favier 1423

Theory and numerics of a thermodynamically consistent framework for geometrically linear gradient plasticity: T. Liebe and P. Steinmann 1437

Smooth C^1-interpolations for two-dimensional frictional contact problems: P. Wriggers, L. Krstulovic-Opara and J. Korelc 1469

AUTHOR INDEX 1497

KEYWORD INDEX 1499